

Amendment to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. **(Currently Amended)** A statistical dialog system, comprising:

a speech understanding mechanism ~~for determining~~ to determine the literal meaning of input speech data;

a dialog semantics learning mechanism ~~for establishing~~ to establish semantic models based on annotated dialog training data, the annotated dialog training data associating literal meaning of input speech data with one or more semantic meanings of the input speech data; and

a statistical dialog manager ~~for interpreting~~ to interpret and select one semantic meaning of the input speech data based on both the literal meaning of the input speech data and corresponding semantic models that are associated with the literal meaning of the input speech data.

2. **(Currently Amended)** The system according to claim 2, wherein the speech understanding mechanism comprises:

a speech recognition mechanism ~~for recognizing~~ to recognize a word sequence from the input speech data based on at least one acoustic models; and

a language understanding mechanism ~~for understanding~~ to understand the literal meaning of the word sequence based on a language model.

3. **(Currently Amended)** The system according to claim 1, further comprising a responding ~~mechanism for generating~~ to generate at least one response to the input speech data based on the semantic meaning of the input speech data.

4. **(Currently Amended)** The system according to claim 3, wherein the responding mechanism includes:

a voice response mechanism ~~for generating~~ to generate a voice response to the input speech data based on the semantic meaning of the input speech data; and

an action response mechanism ~~for activating~~ to activate an action corresponding to the semantic meaning of the input speech data.

5. **(Currently Amended)** The system according to claim 4, wherein the voice response mechanism comprises:

a language response generation mechanism ~~for generating~~ to generate a language response to the input speech according to the semantic meaning of the input speech data; and

a text to speech engine ~~for synthesizing~~ to synthesize the voice of the language response to generate the voice response.

6-7. (Cancelled)

8. **(Currently Amended)** A system, comprising:

a semantic model retrieval mechanism ~~for retrieving~~ to retrieve, from a semantic model storage, semantic models associated with a literal meaning of input speech data; and

a dialog semantic understanding mechanism ~~for interpreting~~ to interpret, during a dialog session, the semantic meaning of the input speech data according to the semantic models and an environmental status.

9. **(Currently Amended)** The system according to claim 8, further comprising:

an environmental status access mechanism ~~for accessing~~ to access the environmental status that affects the interpretation of the semantic meaning of the input speech data, the environmental status being used, together with the semantic models, by the dialog semantic understanding mechanism to interpret the semantic meaning of the input speech data; and

a dialog data annotation mechanism ~~for annotating~~ to annotate the relationship between the literal meaning of the input speech data and the semantic meaning of the input speech data based on the dialog session to generate feedback dialog data.

10. (Previously Presented) A method, comprising:

receiving, by a statistical dialog system, input speech data;
determining, by a speech understanding mechanism in the statistical dialog system, the literal meaning of the input speech data;
retrieving at least one semantic model associated with the literal meaning of the input speech data, the at least one semantic model associating the literal meaning with at least one semantic meaning of the input speech data;
interpreting, by a statistical dialogue manager in the statistical dialogue system, the semantic meaning of the input speech data based on the literal meaning of the input speech data and the at least one semantic model; and
generating a response to the input speech data based on the semantic meaning of the input speech data.

11. (Previously Presented) The method according to claim 10, wherein determining the literal meaning further comprises:

recognizing, by a speech recognition mechanism, a word sequence from the input speech data based on at least one acoustic model; and
generating, by a language understanding mechanism, a literal meaning of the input speech data from the word sequence based on a language model.

12. (Previously Presented) The method according to claim 10, wherein generating a response further comprises at least one of:

generating, by a voice response mechanism, a voice response to the input speech data based on the semantic meaning of the input speech data; and
generating, by an action response mechanism, an action response to the input speech data according to the semantic meaning of the input speech data.

13. (Previously Presented) The method according to claim 12, wherein generating a voice response further comprises:

producing, by a language response generation mechanism, a language response according to the semantic meaning of the input speech data; and

synthesizing, by a text to speech engine, the voice of the language response to generate the voice response.

14-15. (Cancelled)

16. (Original) A method for a statistical dialog manager, comprising:

receiving, from a speech understanding mechanism, a literal meaning corresponding to input speech data;

retrieving, from a semantic model storage, at least one semantic model associated with the literal meaning of the input speech data; and

interpreting, by a dialog semantic understanding mechanism, the semantic meaning of the input speech data based on the literal meaning of the input speech data and the at least one semantic model.

17. (Previously Presented) The method according to claim 16, wherein interpreting the semantic meaning further comprises:

determining at least one semantic meaning of the input speech data according to the literal meaning and the at least one semantic model; and

confirming, based on the at least one semantic meaning of the input speech data, the semantic meaning associated with the literal meaning in a dialog session.

18. (Previously Presented) The method according to claim 17, further comprising:

accessing environmental status that affects the interpretation of the semantic meaning of the input speech data, the environmental status being used, together with the at least one semantic model, by the interpreting to generate the semantic meaning of the input speech data; and

annotating, by a dialog data annotation mechanism, the relationship between the literal meaning of the input speech data and the semantic meaning of the input speech data, confirmed during the dialog session, to generate feedback dialog data.

19. (Previously Presented) A computer-readable medium encoded with a program that, when executed by a computer, causes the computer to:

receive, by a statistical dialog system, input speech data;

determine, by a speech understanding mechanism in the statistical dialog system, the literal meaning of the input speech data;

retrieve at least one semantic model associated with the literal meaning of the input speech data, the at least one semantic model associating the literal meaning with at least one semantic meaning of the input speech data;

interpret, by a statistical dialogue manager in the statistical dialogue system, the semantic meaning of the input speech data based on the literal meaning of the input speech data and the at least one semantic model; and

generate a response to the input speech data based on the semantic meaning of the input speech data.

20. (Previously Presented) The medium according to claim 19, wherein the program, when executed by the computer, further causes the computer to determine the literal meaning by:

recognizing, by a speech recognition mechanism, a word sequence from the input speech data based on at least one acoustic model; and

generating, by a language understanding mechanism, a literal meaning of the input speech data from the word sequence based on a language model.

21. (Previously Presented) The medium according to claim 19, wherein the program, when executed by the computer, further causes the computer to generate a response by one or more of:

generating, by a voice response mechanism, a voice response to the input speech data based on the semantic meaning of the input speech data; and

generating, by an action response mechanism, an action response to the input speech data according to the semantic meaning of the input speech data.

22. (Previously Presented) The medium according to claim 21, wherein the program, when executed by the computer, further causes the computer to generate a voice response by:

producing, by a language response generation mechanism, a language response according to the semantic meaning of the input speech data; and

synthesizing, by a text to speech engine, the voice of the language response to generate the voice response.

23-24. Cancelled

25. (Previously Presented) A computer-readable medium encoded with a program for a statistical dialog manager, the program, when executed by a computer, causing the computer to:

receive, from a speech understanding mechanism, a literal meaning corresponding to input speech data;

retrieve, from a semantic model storage, at least one semantic model associated with the literal meaning of the input speech data; and

interpret, by a dialog semantic understanding mechanism, the semantic meaning of the input speech data based on the literal meaning of the input speech data and the at least one semantic model.

26. (Previously Presented) The medium according to claim 25, wherein the program, when executed by the computer, further causes the computer to interpret the semantic meaning by:

determining at least one semantic meaning of the input speech data according to the literal meaning and the at least one semantic model; and

confirming, based on the at least one semantic meaning of the input speech data, the semantic meaning associated with the literal meaning in a dialog session.

27. (Previously Presented) The medium according to claim 26, wherein the program, when executed by the computer, further causes the computer to:

access environmental status that affects the interpretation of the semantic meaning of the input speech data, the environmental status being used, together with the at least one semantic model, during the interpreting to generate the semantic meaning of the input speech data; and

annotate, by a dialog data annotation mechanism, the relationship between the literal meaning of the input speech data and the semantic meaning of the input speech data, confirmed during the dialog session, to generate feedback dialog data.